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Geographic variation in the Scaly-breasted Thrasher *Margarops fuscus* with descriptions of three new subspecies

by Donald W. Buden

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The Scaly-breasted Thrasher *Margarops fuscus* (Müller), endemic to the Lesser Antilles (Fig. 1), has been recorded on St. Martin (sight records only), Saba, St. Eustatius, St. Kitts (= St. Christopher), Nevis, Barbuda, Antigua, Montserrat, Guadeloupe, Désirade, Marie-Galante, Dominica, Martinique, St. Lucia, Barbados, St. Vincent, the Grenadines (sight records only), and Grenada, occurring in forests, semi-arid woodlands,

and in settled areas (Bond 1956, 1961, 1984). Bond (1956) considered it common generally, but less numerous on St. Vincent and Grenada, rare and local on Barbados, and accidental in the Grenadines, where observed on Union and Carriacou after the hurricane of 1898 and until 1902. Bond (1961) later considered it rare on Grenada as well as on Barbados and the American Ornithologists' Union (1983) apparently made an erroneous place name substitution in reporting it as "possibly extirpated on Barbuda and Grenada."

Cory (1892) included Barbados in a list of localities for *M. fuscus*, but Clark (1905) suggested Cory's code number 33 (= Barbados) probably was a misprint for number 32 (= Grenada), which was omitted from the list. Noble (1916) alluded to examples from Barbados, but I am unaware of any specimens that would have been available then. To the best of my knowledge, the only substantiated records from Barbados are two specimens collected in 1924, several seen near Bissex Hill and Chalky Mount in spring 1959 (Hutt in Bond 1962), another near St. John's Church in 1976 (Hutt in Bond 1977), and at least one other at Russia Gulley, St. Thomas, in October 1987 (M. Hutt *in litt.*). One of the two specimens (AMNH 325625) is labelled as a breeding male in full song with testes measuring one third of an inch (8.5 mm) and collected on the east side of Barbados at an elevation of *c.* 900 feet (274 m) by G. H. Thayer and Sinclair Clark on 18 March. The other (AMNH 325626) is labelled as a female with small ovaries collected at Bathsheba on 25 March; the data are noted on the label as having been extracted from G. H. Thayer's field notes. Both specimens probably were collected in or near the forest along Hackleton's Cliff, which I visited several times during 13–18 July 1988, but without seeing *M. fuscus*.

Müller described *Muscicapa fusca* (= *Margarops fuscus*) in 1776 based on Daubenton's Gobe-Mouche brun de la Martinique, *Pl. Enl.* 568, Figure 2—see Bangs & Penard (1920) for additional comments on this plate. Synonyms include *Turdus montanus* Lafresnaye, 1844, which is preoccupied, and *Turdus apicalis* Hartlaub, 1857, the type of which is of uncertain provenance but is not Daubenton's illustration as was reported by Bangs & Penard (1920). Hartlaub (1857) gave the locality as Senegal, which is unlikely if the specimen is indeed *M. fuscus*. Lichtenstein's (1854) list of birds in the Berlin Museum includes one *Crateropus apicalis* from Senegal, this name being a *nomen nudum*; the specimen doubtless was the type of *Turdus apicalis*. Cabanis (1874) reported that the type was acquired by the Berlin Museum from a French naturalist and was said to be from Africa. He refuted its being an African species and considered it an example of *Turdus montanus* Lafresnaye without elaborating as to how he reached that conclusion but mentioning that the Berlin Museum had no other examples. I am unable to state whether or not this specimen still exists and has been correctly identified.

Lawrence (1887) reported Scaly-breasted Thrashers from Grenada as being smaller and more extensively white ventrally than those from other islands, and he described them as a new species, *Margarops albiventris*. Cory (1888) proposed the name *Margarops montanus rufus* for the birds on Dominica, claiming them "paler" and "reddish brown instead of dark brown" compared with nominate *montanus* (= *fuscus*). But after

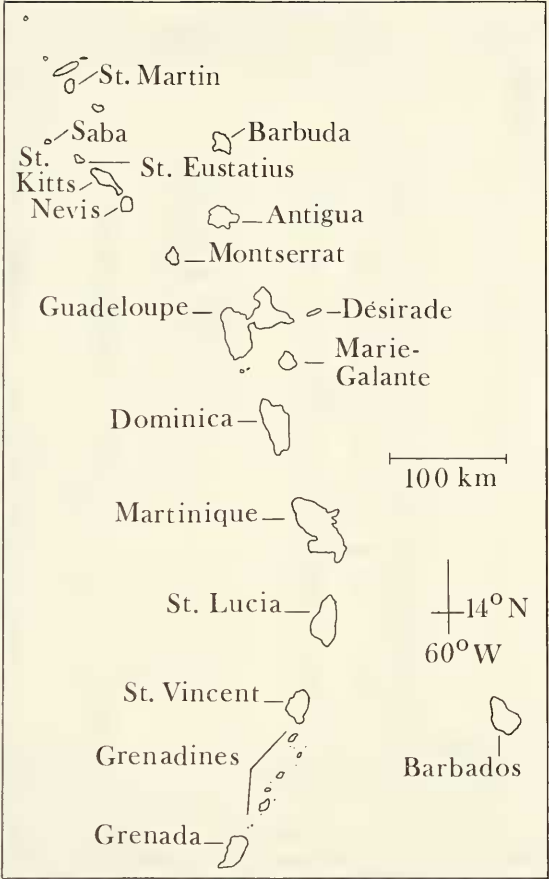


Figure 1. Map of the Lesser Antilles.

examining additional material, Cory (1891) considered the species monotypic and included *M. albiventris* in synonymy, at the same time erecting the genus *Allenia* for all of these populations. No new names were proposed subsequently, but Riley (1904) noted that specimens from Barbuda and Antigua averaged larger and were more olive and not so reddish as those from other islands. Noble (1916) reported that birds from the southern Lesser Antilles tended to be darker and smaller than those from the northern islands, and he went on to say “that if a southern race were to be separated from a northern the Guadeloupe bird would be included in the northern and the Dominica bird in the southern.” In a more recent and widely accepted taxonomic interpretation, Bond (1956, 1959) considered the species monotypic and merged *Allenia* with *Margarops*.

TABLE 1

Mean, standard deviation, and sample size (in brackets) for wing, tail, and bill length measurements (mm) in samples of *Margarops fuscus*

Locality	Sex	Wing	Tail	Bill
Saba	+O ₁	124.8, 1.9 (5)	97.7, 1.8 (5)	18.7, 0.7 (5)
		123.0, 2.0 (3)	99.4, 1.8 (3)	19.4, 1.3 (3)
St. Eustatius	+O ₁ O ₂	125.0 (1)	101.1, 3.1 (2)	18.0, 0.3 (3)
St. Kitts		126.0, 3.3 (7)	99.2, 3.2 (9)	18.6, 0.5 (8)
	+O ₁ O ₂ O ₃	123.8, 2.1 (5)	98.9, 4.8 (5)	18.5, 1.2 (7)
Nevis		123.8, 1.5 (4)	98.1, 3.1 (4)	18.0, 0.7 (4)
	+O ₁ O ₂ O ₃ O ₄	124.5, 0.7 (2)	101.2, 0.9 (2)	18.6, 0.2 (2)
Barbuda		125.0, 1.4 (2)	96.4, 1.8 (2)	17.8, 0.9 (2)
	+O ₁ O ₂ O ₃ O ₄ O ₅	124.7, 4.5 (3)	99.2, 3.3 (3)	17.8, 0.7 (3)
Antigua		125.4, 2.1 (5)	100.3, 2.3 (9)	17.9, 0.8 (9)
	+O ₁ O ₂ O ₃ O ₄ O ₅ O ₆	125.5, 0.7 (2)	99.4, 7.2 (3)	17.8, 0.7 (7)
Montserrat		124.3, 0.6 (3)	95.0, 3.0 (3)	17.8, 0.7 (3)
	+O ₁ O ₂ O ₃ O ₄ O ₅ O ₆ O ₇	125.0, 1.4 (2)	96.0, 4.3 (2)	17.1, 0.4 (2)
Guadeloupe		124.0, 4.0 (8)	97.9, 2.8 (8)	17.7, 0.6 (10)
	+O ₁ O ₂ O ₃ O ₄ O ₅ O ₆ O ₇ O ₈	122.8, 5.2 (9)	95.4, 5.4 (11)	17.8, 0.9 (15)
Dominica		117.6, 2.1 (25)	91.8, 1.6 (22)	17.5, 0.8 (24)
	+O ₁ O ₂ O ₃ O ₄ O ₅ O ₆ O ₇ O ₈ O ₉	117.5, 3.8 (19)	91.5, 3.3 (18)	17.7, 0.8 (21)
Martinique		118.5, 2.1 (4)	91.7, 1.3 (4)	17.8, 1.1 (7)
	+O ₁ O ₂ O ₃ O ₄ O ₅ O ₆ O ₇ O ₈ O ₉ O ₁₀	114.5, 3.4 (4)		17.1, 0.1 (3)
St. Lucia		120.6, 3.4 (28)	91.4, 3.4 (25)	17.3, 0.7 (28)
	+O ₁ O ₂ O ₃ O ₄ O ₅ O ₆ O ₇ O ₈ O ₉ O ₁₀ O ₁₁	119.0, 3.6 (8)	91.8, 5.1 (7)	17.5, 0.7 (8)
Barbados		120.0 (1)	98.5 (1)	15.5 (1)
	+O ₁ O ₂ O ₃ O ₄ O ₅ O ₆ O ₇ O ₈ O ₉ O ₁₀ O ₁₁ O ₁₂	118.0 (1)	93.4 (1)	16.9 (1)
St. Vincent		119.2, 2.4 (10)	90.8, 3.2 (9)	17.8, 0.6 (9)
	+O ₁ O ₂ O ₃ O ₄ O ₅ O ₆ O ₇ O ₈ O ₉ O ₁₀ O ₁₁ O ₁₂ O ₁₃	115.0, 2.6 (11)	87.7, 2.8 (11)	18.1, 0.6 (13)
Grenada		114.8, 2.6 (6)	87.5, 2.6 (4)	16.8, 1.0 (6)
	+O ₁ O ₂ O ₃ O ₄ O ₅ O ₆ O ₇ O ₈ O ₉ O ₁₀ O ₁₁ O ₁₂ O ₁₃ O ₁₄	118.0, 1.4 (4)	84.0 (1)	16.9, 1.0 (5)

I examined most of the specimens (study skins) used in previous studies along with 84 additional specimens collected by Albert Schwartz and associates on 12 different islands during 1961–1963. The Schwartz collection (AS) is now in the Louisiana State University Museum of Natural Science (LSUMZ). Other specimens I examined are in the American Museum of Natural History (AMNH), Field Museum of Natural History (FMNH), Museum of Comparative Zoology (MCZ), and the National Museum of Natural History (USNM).

The measurements, wing length (flat against rule), tail length, bill length (exposed culmen) and size of tail spot (taken on an outermost rectrix, from the tip of the feather to the proximal edge of the spot in the middle of the inner vane) are in millimetres; bills and tails were measured with dial calipers. Immatures and birds with extremely worn feathers were omitted. Colour comparisons were made largely by eye, but dorsal colouration in selected samples was measured also with an Applied Color System Spectro-Sensor II Reflectance Spectrophotometer. The names of islands in Table 1 and Figure 2 are listed roughly in geographic sequence from north to south, and the Guadeloupe samples include specimens from the island dependencies Désirade and Marie-Galante.

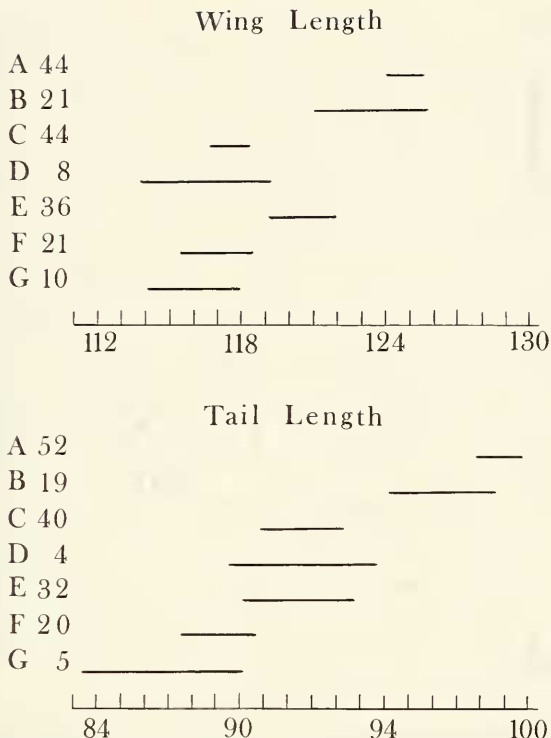


Figure 2. Ranges of 0.95 confidence for the means of wing and tail measurements (mm) in samples of *Margarops fuscus*. A = Leeward Islands (Saba, St. Eustatius, St. Kitts, Nevis, Barbuda, Antigua, Montserrat), B = Guadeloupe, C = Dominica, D = Martinique, E = St. Lucia, F = St. Vincent, G = Grenada; numbers after locality codes are sample sizes with sexes combined.

Scaly-breasted Thrashers from Guadeloupe and its dependencies northward tend to average larger than those from the south, and with no appreciable differences between sexes (Table 1). The cline is somewhat irregular for bill length but smooth for wing and tail measurements, except that the St. Lucia birds deviate in having longer wings (on the average) than do those from Martinique and Dominica to the north. In wing and tail measurements, specimens from the Leeward Islands (Saba southward to Montserrat) are similarly sized and together with those from Guadeloupe average distinctly larger than those from Dominica southward (Fig. 2). The two Barbados birds fall within the range of variation of other southern samples in most measurements, but in tail length the female exceeds the limits of all but the St. Lucia sample. The tips of the bills appear to have been broken or are excessively worn in both specimens resulting in measurements near the lower extreme for all samples combined.

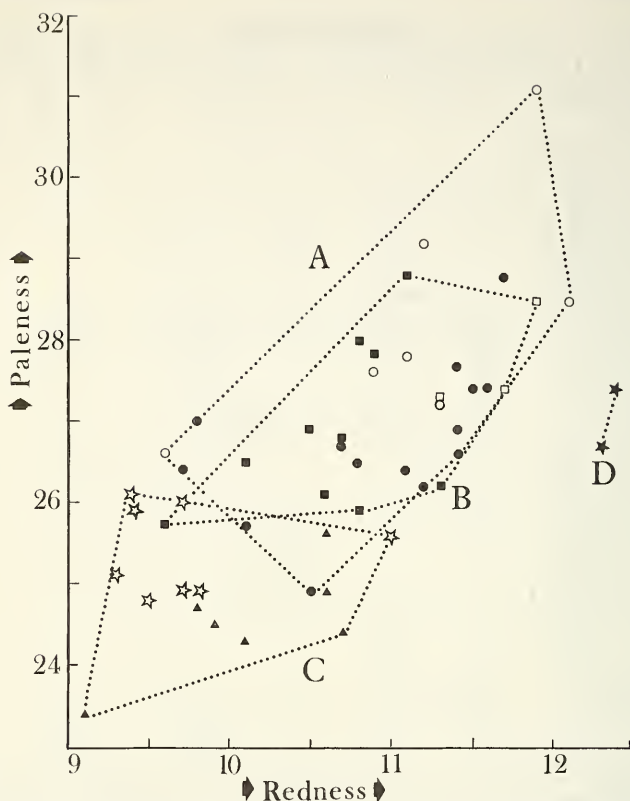


Figure 3. Plot of spectrophotometry values for dorsal colouration in selected samples of *Margarops fuscus*. A = "northern islands":—Leeward Islands (Saba, St. Kitts, Nevis, Barbuda, Antigua, Montserrat) (solid circles) and Guadeloupe (open circles), B = "central islands":—Dominica (solid squares) and Martinique (open squares), C = "southern islands":—St. Lucia (open stars), St. Vincent (solid triangles), D = Barbados.

In dorsal colouration, specimens from the northern islands tend to be paler brown than those from the south (Fig. 3). Adjacent populations overlap broadly in this character, but differences are evident when series are compared. Geographical differences in ventral colouration are much less marked and not so consistent within samples, but specimens from St. Vincent tend to be slightly darker below than those from other islands. The white spots on the tips of the tail feathers are largest in birds from St. Lucia and especially small in the two from Barbados, some wear notwithstanding.

Several specimens from different islands are distinctly more reddish-brown or rufous than others, apparently foxed. Bangs & Penard (1920) suggested that the reddish colour of Daubenton's illustration of *Gobe-Mouche brun de la Martinique* might be due to a change in pigment over the years, and they remarked on its resemblance chromatically to the type of *Turdus montanus* Lafresnaye from Guadeloupe, "which in its present

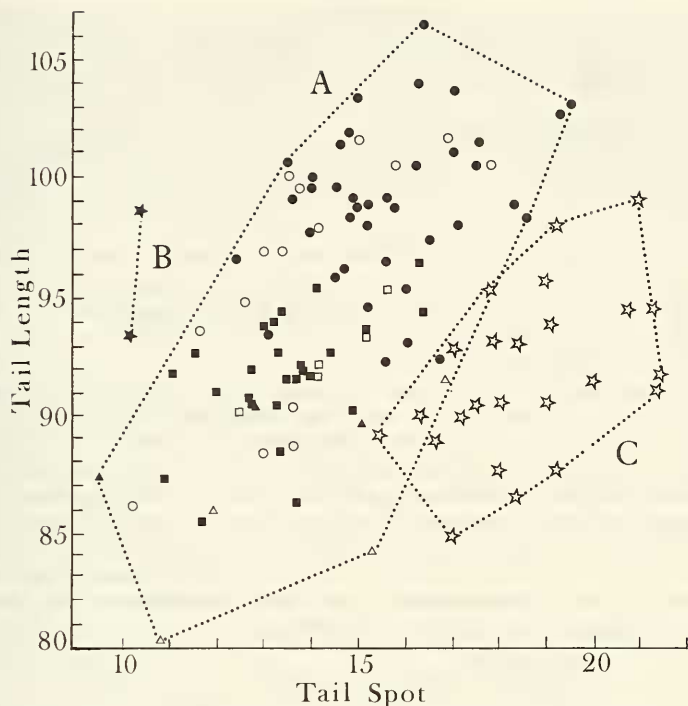


Figure 4. Plot of measurements (mm) of tail length versus size of tail spot on outermost rectrix in samples of *Margarops fuscus*. A = Leeward Islands (Saba, St. Eustatius, St. Kitts, Nevis, Barbuda, Antigua, Montserrat) (solid circles), Guadeloupe (open circles), Dominica (solid squares), Martinique (open squares), St. Vincent (solid triangles), Grenada (open triangles); B = Barbados; C = St. Lucia.

faded condition from long exposure to the light, is much redder above than fresh specimens . . .” The Lafresnaye specimen (MCZ 76370) was originally a display mount, which may account for its being somewhat paler on its presumably more exposed left side. The type of *Margarops montanus rufus* Cory (FMNH 29031) was examined for me by D. Maurer, who considered it similar in colouration to other examples of *M. fuscus* in the FMNH collection, and not noticeably rufescent. Among the 45 *M. fuscus* from Dominica that I examined, two (FMNH 29302 and USNM 90601) are apparently faded reddish-brown.

The two specimens from Barbados lack the extreme reddish-brown hue of the obviously discoloured birds, but both are distinctly more reddish dorsally than is characteristic of examples from other islands (Fig 3). The age of the specimens alone cannot account for this disparity as examples collected during the late 1800s are chromatically similar to those collected on the same islands during the 1960s. The early history of the two specimens is uncertain. Museum accession records indicate that both apparently were a part of Thayer’s shipment of 74 Barbados bird

specimens received by the AMNH in February 1926. But the museum archives also contain a handwritten packing slip from Thayer that reads in part: "Barbados *Allenia* (rare, local breeding resident) taken back (to be returned) for study, comparison of a *few* more Barbados & many St. Vincent specimens, and perhaps description of a new race."

Bond (1956) stated that specimens from "Barbuda, Antigua and (particularly) Barbados" are browner above than others. His inference that Barbados birds are more similar chromatically to those from the Leeward Islands (at least Barbuda and Antigua) than to those from the southern islands agrees with my observations generally and contradicts Noble's (1916) opinion that Barbados birds are more similar to examples from the south (Grenada) in being darker than those from the north (Guadeloupe). Whatever evidence (specimens?) led Noble to this conclusion was left unstated.

Thayer apparently considered Barbados birds worthy of subspecific recognition as the older of the two labels on AMNH 325625 bears the notation "*Allenia montana* [atlantica] proposed name G. H. T." The range of variation of *M. fuscus* on Barbados obviously cannot be adequately assessed by only two specimens, but in view of its rarity there (if still extant), additional material is unlikely to be forthcoming. As both specimens are similar to each other mensurally and chromatically and differ from others to the same degree generally as others that I consider nomenclaturally distinct differ among themselves, I propose the Barbados birds be treated as a separate subspecies under the name

***Margarops fuscus atlanticus* subsp. nov.**

Holotype. AMNH 325625; male; Barbados, east side, elev. *c.* 900 feet (274 m); collected 18 March 1924 by G. H. Thayer and Sinclair Clark.

Diagnosis. A subspecies of *M. fuscus* characterized by a reddish brown dorsum and small amount of white in the tail.

Range. Known only from Barbados, West Indies.

Etymology. From the name "*Allenia montana atlantica*" suggested by G. H. Thayer, presumably alluding to the location of Barbados on the western edge of the Atlantic Ocean, or more specifically to the eastern (= Atlantic-facing) side of the island where the only known specimens were collected.

For the population of relatively large and pale birds in the northern Lesser Antilles, I propose the name

***Margarops fuscus hypenemus* subsp. nov.**

Holotype. LSUMZ 142124 (original number AS 4349); male; 1.5 mi. (2.4 km) SW Lodge, St. Mary Cayon Parish, St. Christopher (= St. Kitts), West Indies; collected 18 April 1962 by Albert Schwartz.

Diagnosis. A subspecies of *M. fuscus* characterized by large size (wing length averaging 122.8 to 126.0 mm vs. 114.5 to 120.6 in other subspecies) and relatively pale brown dorsum lacking the rufescence of *M. f. atlanticus*.

Range. Known from the northern Lesser Antilles on Saba, St. Eustatius, St. Kitts, Nevis, Barbuda, Antigua, Montserrat, and Guadeloupe (including dependencies Désirade and Marie-Galante), and probably occurring on St. Martin based on sight records of *M. fuscus* by Robbins (in Bond 1984).

Etymology. From the Greek word for "leeward" in allusion to the name Leeward Islands for the Lesser Antilles north of Guadeloupe, those islands to which this race is nearly confined.

For the population on St. Lucia, I propose the name

Margarops fuscus schwartzi subsp. nov.

Holotype. LSUMZ 142125 (original number AS 3532); male; L'Hermitage, Dauphin Quarter, St. Lucia, West Indies; collected 18 January 1962 by Albert Schwartz.

Diagnosis. A subspecies of *M. fuscus* characterized by a large amount of white on the tail, the spots on the tips of the outermost rectrices averaging larger (absolutely and relative to tail length) than in other subspecies, and wing length averaging larger than in *M. f. fuscus* and dorsum slightly darker than in *M. f. hypenemus* and lacking the rufescence of *M. f. atlanticus*.

Range. Known only from St. Lucia, West Indies.

Etymology. Named after Albert Schwartz in recognition of his contributions to our knowledge of West Indian biogeography, and whose extensive collection of *M. fuscus* constituted much of the comparative material used in this study.

Specimens examined

M. f. hypenemus, 51 ♂♂, 41 ♀♀, 3 unsexed. Saba 2 ♂♂, 3 ♀♀ (AS), 3 ♂♂ (USNM); St. Eustatius 1 ♂ (MCZ), 2 ♂♂ (FMNH), 1 ♂ (USNM); St. Kitts 4 ♂♂, 2 ♀♀ (AS), 3 ♂♂ (FMNH), 2 ♂♂, 2 ♀♀ (MCZ), 3 ♀♀ (USNM); Nevis 4 ♂♂, 2 ♀♀ (AS); Barbuda 2 ♂♂, 1 ♀ (AMNH), 2 ♀♀ (USNM); Antigua 1 ♂, 3 ♀♀ (AMNH), 1 ♂ (AS), 4 ♂♂, 3 ♀♀ (FMNH), 3 ♂♂, 2 ♀♀ (USNM); Montserrat 3 ♂♂, 1 ♀ (AS), 1 ♀ (USNM); Guadeloupe 1 ♂, 2 ♀♀ (AMNH), 1 unsexed (AS), 4 ♂♂, 9 ♀♀, 1 unsexed (MCZ), 2 ♂♂, 4 ♀♀ (FMNH), 3 ♂♂, 2 ♀♀ (USNM); Désirade 1 unsexed (AS), 1 ♂ (FMNH); Marie-Galante 2 ♀♀ (AS), 1 ♂ (USNM).

M. f. fuscus, 48 ♂♂, 44 ♀♀, 2 unsexed; Dominica 7 ♂♂, 6 ♀♀ (AMNH), 13 ♂♂, 11 ♀♀ (AS), 1 ♀ (FMNH), 4 ♂♂, 3 ♀♀ (MCZ), 1 ♂, 1 ♀ (USNM); Martinique 2 ♂♂, 1 ♀ (AS), 4 ♂♂, 2 ♀♀ (FMNH), 2 unsexed (MCZ), 1 ♂ (USNM); St. Vincent 2 ♀♀ (AMNH), 4 ♂♂, 2 ♀♀ (AS), 2 ♂♂, 7 ♀♀ (MCZ), 4 ♂♂, 3 ♀♀ (USNM); Grenada 1 ♂ (AMNH), 5 ♂♂, 5 ♀♀ (FMNH).

M. f. schwartzi, 28 ♂♂, 8 ♀♀, 9 unsexed; St. Lucia 1 ♂, 2 ♀♀ (AMNH), 21 ♂♂, 2 ♀♀ (AS), 2 ♀♀ (FMNH), 3 ♂♂, 1 ♀, 9 unsexed (MCZ), 3 ♂♂, 1 ♀ (USNM).

M. f. atlanticus. Barbados 1 ♂, 1 ♀ (AMNH).

Summary

Four subspecies of *M. fuscus* are recognized—*M. f. hypenemus* in the northern Lesser Antilles to as far south as Guadeloupe and its dependencies Désirade and Marie-Galante (large size, pale to medium brown dorsum, and moderate to large-sized tail spots), *M. f. fuscus* from Dominica southward to Grenada excluding St. Lucia and Barbados (small to moderate size, medium to dark brown dorsum, and small to moderate-sized tail spots), *M. f. schwartzi* on St. Lucia (moderate size, medium to dark brown dorsum, and large tail spots), and *M. f. atlanticus* on Barbados (moderate size, reddish brown dorsum, and small tail spots).

Acknowledgements

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